Turning your Bench Supply into a Dual Supply

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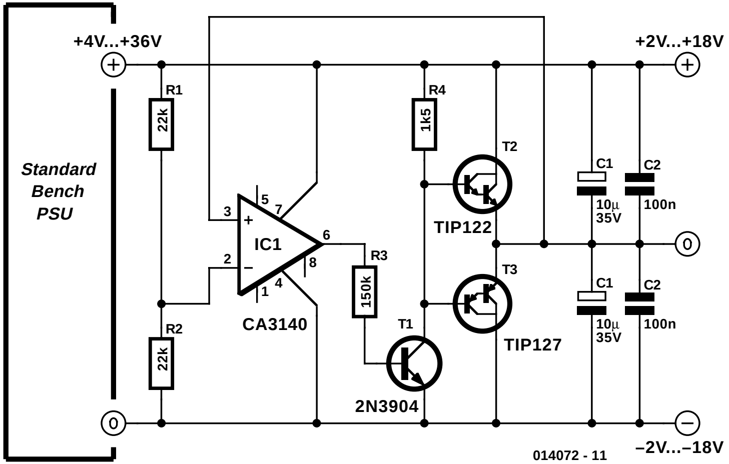
When experimenting with opamp circuits, a dual supply is often needed. The circuit here presents a simple add-on that turns an ordinary bench power supply (PSU) into a dual supply.

The circuit creates, electronically, a mid-point at U/2 which is used as the ground reference for the circuit under test. Basically, the add-on is a non-inverting opamp buffered with a couple of darlington power transistors. The buffering makes the add-on capable of delivering several hundred milliamps. Note that the phase reversal of the buffer circuit means that the feedback has to be returned to the non-inverting input of the CA3140. The CA3140 has a wide supply range, from 4 to 36 Volts. None of the parts are critical and it should be easy to get good results with ‘off the shelf’ parts. The add-on itself consumes only a few milliamps.



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